



## APPRAISAL BULLETIN

Volume XXIV

COPYRIGHT—ROY WENZLICK & CO.—1955

Number 7

*Real Estate Economists, Appraisers and Counselors*

### RESIDENTIAL CONSTRUCTION COST DATA

**T**HE problem of estimating construction costs by the cubic foot method is often complicated by different building designs. For example, a residence without a basement will have a higher cubic cost than another of the same area with a basement. Likewise, the newer types of houses with their low gables will have a higher cubic cost than will an older type of house (of the same quality) with high gables.

For the past several years we have published breakdowns of cubic foot costs by type of space. In these breakdowns we show the cost per cubic foot of roof space, living space, and basement space. The cubic content of the roof is figured from the top of the ceiling joists to the outer surface of the roof. The cubic content of the basement is figured from the bottom of the first floor joists to 6 inches beneath the basement floor. Therefore, the living space includes all volume lying between the bottom of the first floor joists and the top of the ceiling joists.

In computing the costs of the basement and attic space, only the structural portion has been considered. The cost of the plumbing, heating, and electrical systems is included in the cost of the living space, even though portions are actually located in the basement or attic.

The various unit cost figures in this bulletin may be substituted within certain limits. For example, suppose you were appraising a brick house of approximately the same size and shape as the six-room frame house. Instead of using 91.6¢ per cubic foot for the cost of the living space, you would substitute the cost of the living space in the six-room brick house, or \$1.005 per cubic foot. You would find, therefore, that the living space would cost \$14,850 and the total cost would be \$17,870, compared with \$16,570 for a frame house of the same size and shape.

In a slightly different manner, suppose you were appraising a brick veneer house of approximately the same size and shape as the brick ranch house. This is a small house of only 16,250 cubic feet, including a full basement. Moreover, it has a very small roof cubage. These two factors account for the high cubic foot cost of its living space (\$1.21). Because of the wide difference in size, it

## CUBIC COSTS OF DIFFERENT TYPES OF SPACE



### SIX-ROOM FRAME HOUSE

(Ground area 825 sq. ft.)

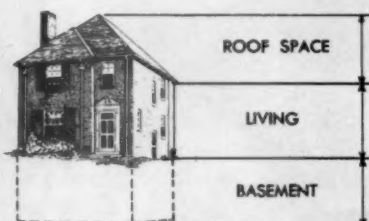
Type space	Cost	Volume	Cost per cu. ft.	% of total cost
Roof	\$ 1,050	3,300	31.8¢	6.3
Living	13,550	14,788	91.6	81.8
Basement	1,970	6,200	31.8	11.9
<b>Total</b>	<b>\$16,570</b>	<b>24,288</b>	<b>68.2¢</b>	<b>100.0</b>



### FIVE-ROOM BRICK VENEER HOUSE

(Ground area 1,165 sq. ft.)

Type space	Cost	Volume	Cost per cu. ft.	% of total cost
Roof	\$ 1,825	5,003	36.5¢	12.1
Living	10,655	11,125	95.8	70.5
Basement	2,620	8,782	29.8	17.4
<b>Total</b>	<b>\$15,100</b>	<b>24,910</b>	<b>60.6¢</b>	<b>100.0</b>



### SIX-ROOM BRICK HOUSE

(Ground area 751 sq. ft.)

Type space	Cost	Volume	Cost per cu. ft.	% of total cost
Roof	\$ 1,100	2,878	38.2¢	6.4
Living	14,300	14,222	100.5	82.6
Basement	1,900	6,000	31.7	11.0
<b>Total</b>	<b>\$17,300</b>	<b>23,100</b>	<b>74.9¢</b>	<b>100.0</b>



### SIX-ROOM CALIFORNIA BUNGALOW

(Ground area 992 sq. ft.)

Type space	Cost	Volume	Cost per cu. ft.	% of total cost
Roof	\$ 850	2,480	34.3¢	9.0
Living	8,100	8,430	96.0	86.0
"Basement"	470	1,209	38.9	5.0
<b>Total</b>	<b>\$ 9,420</b>	<b>12,119</b>	<b>77.7¢</b>	<b>100.0</b>



### BRICK BUNGALOW

(Ground area 1,190 sq. ft.)

Type space	Cost	Volume	Cost per cu. ft.	% of total cost
Roof	\$ 1,860	5,223	35.6¢	12.0
Living	11,000	11,050	99.5	71.0
Basement	2,630	9,100	28.9	17.0
<b>Total</b>	<b>\$15,490</b>	<b>25,373</b>	<b>61.0¢</b>	<b>100.0</b>



### BRICK RANCH HOUSE

(Ground area 840 sq. ft.)

Type space	Cost	Volume	Cost per cu. ft.	% of total cost
Roof	\$ 840	2,520	33.3¢	7.5
Living	8,810	7,300	120.7	78.5
Basement	1,580	6,430	24.6	14.0
<b>Total</b>	<b>\$11,230</b>	<b>16,250</b>	<b>69.1¢</b>	<b>100.0</b>

# CONSTRUCTION COST VARIATIONS IN 72 CITIES

## PERCENTAGES ABOVE OR BELOW ST. LOUIS COST

Akron, Ohio . . . . .	+2.8%	Los Angeles, Calif. . . . .	-10.5%
Albany, N. Y. . . . .	-2.5	Louisville, Ky. . . . .	-8.0
Allentown, Pa. . . . .	-1.0	Madison, Wis. . . . .	-2.5
Atlanta, Ga. . . . .	-20.0	Manchester, N. H. . . . .	-14.0
Austin, Tex. . . . .	-4.3	Memphis, Tenn. . . . .	-12.4
Baltimore, Md. . . . .	-11.7	Miami, Fla. . . . .	-17.5
Baton Rouge, La. . . . .	-16.0	Milwaukee, Wis. . . . .	-4.5
Birmingham, Ala. . . . .	-8.0	Minneapolis, Minn. . . . .	-4.5
Boise, Idaho . . . . .	-12.4	Nashville, Tenn. . . . .	-15.0
Boston, Mass. . . . .	-5.0	Newark, N. J. . . . .	+7.0
Bridgeport, Conn. . . . .	+2.8	New Haven, Conn. . . . .	+3.0
Charleston, W. Va. . . . .	-3.5	New Orleans, La. . . . .	-7.0
Charlotte, N. C. . . . .	-26.0	New York, N. Y. . . . .	+2.0
Chattanooga, Tenn. . . . .	-22.0	Norfolk, Va. . . . .	-20.0
Chicago, Ill. . . . .	-1.0	Oakland-San Francisco, Calif. . . . .	-8.5
Cincinnati, Ohio . . . . .	0.0	Oklahoma City, Okla. . . . .	-8.0
Cleveland, Ohio . . . . .	-1.5	Omaha, Nebr. . . . .	-7.0
Columbus, Ohio . . . . .	-7.0	Philadelphia, Pa. . . . .	-3.5
Dallas, Tex. . . . .	-8.0	Phoenix, Ariz. . . . .	-15.0
Dayton, Ohio . . . . .	+3.5	Pittsburgh, Pa. . . . .	-0.7
Denver, Colo. . . . .	-7.5	Portland, Maine . . . . .	-8.8
Des Moines, Iowa . . . . .	+1.0	Portland, Oreg. . . . .	-16.0
Detroit, Mich. . . . .	-5.0	Providence, R. I. . . . .	-2.5
Duluth, Minn. . . . .	-1.8	Richmond, Va. . . . .	-22.0
Fort Wayne, Ind. . . . .	+1.7	Rochester, N. Y. . . . .	-0.7
Grand Rapids, Mich. . . . .	-6.0	ST. LOUIS, MO. . . . .	0.0
Hartford, Conn. . . . .	-1.8	Salt Lake City, Utah . . . . .	-10.5
Houston, Tex. . . . .	-8.7	Savannah, Ga. . . . .	-22.0
Indianapolis, Ind. . . . .	-2.5	Seattle, Wash. . . . .	-16.0
Jackson, Miss. . . . .	-21.0	Shreveport, La. . . . .	-13.0
Jacksonville, Fla. . . . .	-19.0	Tampa, Fla. . . . .	-9.5
Jersey City, N. J. . . . .	+0.8	Trenton, N. J. . . . .	+6.0
Kansas City, Mo. . . . .	-4.3	Tulsa, Okla. . . . .	-10.5
Knoxville, Tenn. . . . .	-13.0	Washington, D. C. . . . .	-9.5
Lincoln, Nebr. . . . .	-8.7	Wichita, Kans. . . . .	-10.5
Little Rock, Ark. . . . .	-13.0	Youngstown, Ohio . . . . .	+3.0

would not be correct to substitute the cost of the living space in the brick veneer house (95.8¢). However, it would be correct to adjust this \$1.21 per cubic foot downward in proportion to the difference in the cost of living space in the five-room brick and the five-room brick veneer. Since the living space in the five-room brick costs 99.5¢ per cubic foot, and that in the five-room brick veneer costs 95.8¢, it is permissible to reduce the \$1.21 by about 4%. Therefore, the living space in a brick veneer ranch house would cost about \$1.16 per cubic foot, compared with the \$1.21 in the brick ranch house.

The total cost of the basement space is naturally governed by the size of the ground area. The exception to this is found in the basement cost of the brick ranch house. Its cost of \$1,580 is the lowest of any of these houses with basements. However, it is of new design and has a lower basement ceiling than the older types of houses and no outside basement entrance. Furthermore, its foundation walls are 8 inches thick compared with 12 inches in the other houses. The California-type bungalow should not be included in this comparison because it has no true basement. There is only a crawl space. The foundation is poured concrete, 6 inches thick, and the cost of the "basement" is made up of the foundation walls, footings, and 4 x 4 wood supports.

NOTE: A bulletin on this same topic was published in 1951. See January 31, 1951, Appraisal Bulletin - Volume XX, Number 5.